



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,379	02/25/2004	Hyung-Joon Kim	YOU102	3388
<div>7590 10/17/2007</div> <div>Donald J. Perreault Grossman, Tucker, Perreault & Pflieger, PLLC 55 South Commercial Street Manchester, NH 03101</div>				
			EXAMINER CAMERON, ERMA C	
			ART UNIT 1792	PAPER NUMBER
			MAIL DATE 10/17/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/786,379	Applicant(s) KIM ET AL.	
	Examiner /Erma Cameron/	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) Claim 6: contradicts claim 1, in that claim 1 requires that the coating be formed directly on the metal surface, but claim 6 allows the metal to be resin-coated.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
or

Art Unit: 1792

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. The rejection of Claims 1-3, 5-7, 9-11 and 13 under 35 U.S.C. 102(b) as being clearly anticipated by JP 10-001786 is withdrawn because of the amendment filed 8/1/2007.

5. The rejection of Claims 1-3, 7-8 and 10-11 under 35 U.S.C. 102(b) as being clearly anticipated by JP 57-198269 is withdrawn because of the amendment filed 8/1/2007.

6. The rejection of Claims 1-3 and 7-11 under 35 U.S.C. 102(b) as being clearly anticipated by Ohno et al (Hyomen Kagaku, 18(6), pp 373-379, 1997) is withdrawn because of the amendment filed 8/1/2007.

7. The rejection of Claims 1-3 and 7-11 under 35 U.S.C. 102(b) as being clearly anticipated by Ruan et al (Thin Solid Films 419, pp 95-104, 2002) is withdrawn because of the amendment filed 8/1/2007.

8. Claims 1-2 and 7-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Reihls et al (6652669).

Art Unit: 1792

'669 teaches treating aluminum or Al alloy by coating with n-decanethiol in ethanol at 1 g/l (see Examples).

Response to Arguments

The applicant has argued that the metal surface must first be coated with a noble metal adhesion promoter. The examiner disagrees. '669 clearly states in the Abstract, claim 1 and elsewhere that adhesion promoters are optional. The examples that the applicant points to for support are exemplary, and do not define the limitations of the '669 invention.

9. Claims 1-3, 5-11 and 13-14 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by JP 10 - 001784.

'784 teaches applying 1-octadecane thiol or other alkyl thiols to electro-galvanized steel, in a water-alcohol mixture at 5 millimoles (presumably in one liter), by dipping and drying (see Abstracts; [0007]-[0011] of translation).

10. Claims 1-2 and 7-11 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Nozawa et al (Corrosion Science, 39(9), pp 1625-1639, 1997).

Nozawa teaches protecting iron from corrosion by coating with a 5 mM solution of n-decanethiol in ethanol by immersion, and then drying (see Abstract; pp 1626, 1627 and 1638).

Art Unit: 1792

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The rejection of Claims 12 and 14 under 35 U.S.C. 103(a) as being unpatentable over JP 10-001786 is withdrawn.

13. The rejection of Claims 9 and 12 under 35 U.S.C. 103(a) as being unpatentable over JP 57-198269 is withdrawn.

14. The rejection of Claim 12 under 35 U.S.C. 103(a) as being unpatentable over Ohno (Hyomen Kagaku, 18(6), pp 373-379, 1997) is withdrawn.

15. The rejection of Claim 12 under 35 U.S.C. 103(a) as being unpatentable over Ruan et al (Thin Solid Films 419, pp 95-104, 2002) is withdrawn.

16. Claims 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reihls et al (6652669).

'669 is applied here for the reason given above.

Art Unit: 1792

'669 teaches n-decanethiol. This is a homolog of the octadecanethiol of claim 3.

'669 does not teach that the immersion time is 3''-15', but it would have been obvious to one of ordinary skill in the art to have optimized the contact time through no more than routine experimentation.

17. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10 - 001784.

'784 is applied here for the reasons given above.

'784 fails to teach length of time for the dipping process, but it would have been obvious to optimize the length of time because the dipping time is known to be a parameter that is important to control in a coating step.

18. Claims 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nozawa (Corrosion Science 39(9), pp 1625-1639, 1997).

Nozawa is applied here for the reasons given above.

Nozawa teaches an n-decane thiol, but not octadecane thiol. N-decane is a homolog of octadecane, and as such would be expected to be equally successful.

Nozawa teaches 30 minutes for the immersion time, not 3''-15'. but it would have been obvious to optimize the length of time because the immersion time is known to be a parameter that is important to control in a coating step.

Art Unit: 1792

Conclusion

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to /Erma Cameron/ whose telephone number is 571-272-1416. The examiner can normally be reached on 8:30-6:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1792

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Erma Cameron/
Primary Examiner
Art Unit 1792

October 15, 2007